

July 11, 2016

**TO: ALL POTENTIALLY INTERESTED PARTIES:**

**RE:** Brazosport Water Authority (SWIFT Project No. 51013) – Brackish Groundwater Reverse Osmosis Water Treatment Plant and Water Wells

The attached document is being provided for your information. This is not a permit application. No action is being requested from your agency and no response is required.

The attached document is an environmental determination issued by the Texas Water Development Board (TWDB) for a proposed project to be funded through the TWDB. Pursuant to the environmental assessment requirements of 31 Texas Administrative Code (TAC) Chapter 363, Subchapter A, the Executive Administrator of the TWDB has determined that a portion of the proposed action described in the attached documents may be exempted from formal environmental review requirements. A review by TWDB staff included a consideration of potential environmental impacts and permitting requirements. If there were any concerns about particular regulations or permits, the appropriate regulatory agency would have been contacted for clarification, and this would be described in the attached environmental determination.

Comments regarding this determination may be submitted to the Director of Regional Water Planning and Development, TWDB, P.O. Box 13231, Austin, Texas 78711-3231.

July 11, 2016

## **DETERMINATION OF NO EFFECT**

### **TO ALL INTERESTED AGENCIES AND PUBLIC GROUPS:**

Pursuant to the environmental assessment requirements of 31 Texas Administrative Code (TAC) Section 363.14 of the Texas Water Development Board (TWDB) rules, the Executive Administrator of the TWDB has determined that a portion of the proposed action identified below may be exempted from formal environmental review requirements:

Brazosport Water Authority, Brazoria County, Texas  
Brackish Groundwater Reverse Osmosis Water Treatment Plant and Water Wells  
SWIFT Project No. 51013  
Total TWDB Commitment: \$28,300,000 (LM15015, LM16015)

The Brazosport Water Authority (Authority) provides wholesale water service to seven cities in the southern Brazoria County area, in addition to the Dow Chemical Company and two Texas Department of Criminal Justice units. In December 2013, the Authority completed a TWDB Regional Water Facility Planning Grant Study (Study) that examined the potential for serving the current Authority service area, as well as other portions of Brazoria County in the future. The Study led to several recommendations including the development of a Reverse Osmosis (RO) Water Treatment Plant (WTP) at the Authority's site of the current Surface WTP to be fed by a new brackish groundwater well field in the vicinity of the current plant site. The Authority is proposing to use funding from a \$28,300,000 State Water Infrastructure Fund for Texas (SWIFT) Program loan for the planning, design, and construction phases required to implement the Brackish Groundwater RO WTP and Water Wells project. Specifically, the Authority plans to construct wells located in the Gulf Coast Aquifer within the Lissie formation, and distribution lines ranging from 12-inches to 36-inches in diameter. The WTP would provide cartridge filter pretreatment, chemical additives, and final treatment through three RO membrane racks. Discharge from the RO process will be accomplished through discharge to the Brazos River below State Highway 332, as this segment does not have a limitation on the concentration of Total Dissolved Solids (TDS). This project requires a full environmental review, including the submission of an Environmental Data Form and the issuance of an Environmental Determination.

In order to confirm the total number of water wells needed for this project, the Authority is proposing to drill a pilot/production well, hereafter referred to as Well No. 1, in the northeast corner of the existing facility site. This Determination of No Effect (DNE) is for the construction of Well No. 1 only. In addition, the project will require all necessary appurtenances, including the addition of fill beneath Well No. 1 to elevate the well above the 100-year floodplain. All work will be conducted within the existing facility site.

The Authority's existing facility site was previously reviewed by regulatory agencies under the Authority's WTP Improvements project (TWDB Project No. 62643). The following agency coordination was completed under TWDB Project No. 62643.

On January 20, 2015, an intensive cultural resources survey was conducted by aci consulting as part of the Authority's WTP improvements project. The Area of Potential Effect is defined as the 19.8-acre area of the existing Authority WTP. The investigation consisted of an intensive pedestrian survey, including shovel testing and backhoe trenching, and did not result in the identification of any archeological sites or historic structures. aci consulting, on behalf of the Authority, contacted the Texas Historical Commission (THC) on June 30, 2015, requesting a review of the existing facility site. The THC provided a review response dated July 10, 2015 indicating concurrence with the assessment that cultural resources are not likely to be present within the proposed project area. Therefore, the construction of Well No. 1 is not expected to impact cultural resources.

aci consulting, on behalf of the Authority, contacted the Local Floodplain Administrator on June 30, 2015 for review of the proposed project area. Original correspondence was sent via certified mail on June 20, 2015. The certified mail receipt indicated that it was delivered to the City of Lake Jackson Engineer on July 6, 2015. CDM Smith, the project engineer, received a response from the Floodplain Administrator on October 14, 2015. The Floodplain administrator concluded that there will be no significant and lasting adverse floodplain impacts within the proposed project area resulting from future onsite construction. The Authority is proposing to use additional fill within the area of Well No. 1 in order to raise the well above the 100-year flood zone in order to prevent flooding.

aci consulting, on behalf of the Authority, conducted a wetland delineation within the proposed project area. Field investigations determined that approximately 5.16 acres of potentially jurisdictional waters of the U.S. located within the existing facility site. Based on field investigations, Well No. 1 is not located within one of the identified potentially jurisdictional waters of the U.S. Therefore, the project will not adversely impact wetlands or waters of the U.S. that are under the jurisdiction of the U.S. Army Corps of Engineers.

A desktop analysis of the Texas Parks and Wildlife Department (TPWD) Texas Natural Diversity Database did not reveal the presence of elemental occurrences (EOs) of rare, candidate, threatened, or endangered species or critical habitat within the existing facility site. A qualified biologist conducted a field survey within the existing facility site and determined it is unlikely that any state-listed species will be impacted. Therefore, the construction of Well No. 1 is not expected to impact threatened or endangered species or habitat. However, the construction of Well No. 1 will require clearing vegetation. TPWD was afforded the opportunity to review the WTP Improvements project and provided a response on August 4, 2015 (TPWD Project No. ERCS-11196). The DNE is conditioned to read the following: Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1 – July 15 migratory bird nesting season of each year the project is authorized and lasting for the life of the project. To comply with the Migratory Bird Treaty Act (MBTA), the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all

construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1 – July 15.

This determination for Well No. 1 is allowed because the specified project elements should not entail significant adverse impacts to the quality of the human environment. Documentation supporting this determination is on file at the TWDB.

This determination may be rescinded if it is found that:

- (1) because of changes in the project the proposed actions no longer correspond to the description provided above;
- (2) the project may have significant adverse environmental effects; or
- (3) Federal, State, or local laws are being or may be violated by implementation of this project.

The project also must comply with the following conditions:

- Construction activities such as, but not limited to, tree felling as well as vegetation clearing, trampling, or maintenance should occur outside the April 1 – July 15 migratory bird nesting season of each year the project is authorized and lasting for the life of the project. To comply with the Migratory Bird Treaty Act, the proposed site should be surveyed for migratory bird nest sites prior to construction or future maintenance activities. Since raptors nest in late winter and early spring, all construction activities as identified above should be excluded from a minimum zone of 100 meters around any raptor nest during the period of February 1 – July 15;
- Standard emergency conditions for the discovery of cultural resources; and,
- Standard emergency conditions for the discovery of threatened and endangered species.

Comments regarding this determination may be submitted to the Director, Regional Water Planning & Development, Texas Water Development Board, P.O. Box 13231, Austin, Texas 78711-3231.



GULF COAST BIRD OBSERVATORY

This Way St

CITY OF LAKE JACKSON

CITY OF LAKE JACKSON

Well #1  
29°02'10.05N,  
95°28'16.44W

DOW CHEMICAL COMPANY

Lift Station  
Wet Well

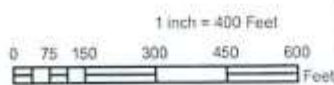
BRAZOSPORT  
WATER AUTHORITY

FM 2004

CITY OF LAKE JACKSON

No wells located within 1/4-mile radius of proposed well, based on TWDB well database.

CDM  
Smith



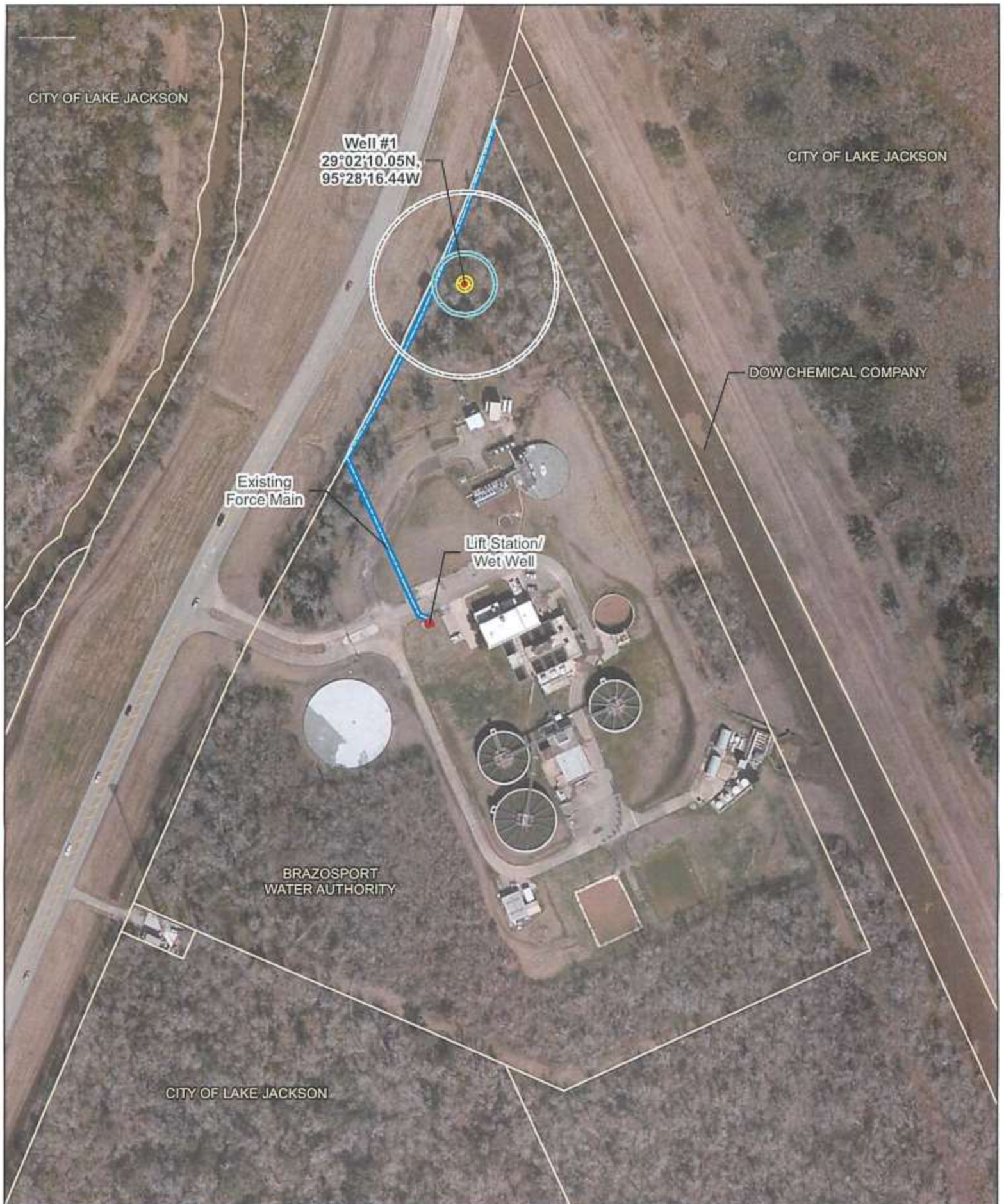
### BWA Well #1 Site Map

Brazosport Water Authority

#### Legend

- Well #1
- 10ft Radius
- 50ft Radius
- 150ft Radius
- BCAD Parcels
- 1/4mi Radius





CDM  
Smith



1 inch = 200 Feet  
0 37.5 75 150 225 300  
Feet

### BWA Well #1 Site Map

Brazosport Water Authority

#### Legend

- Well #1
- BCAD Parcels
- 10ft Radius
- 50ft Radius
- 150ft Radius

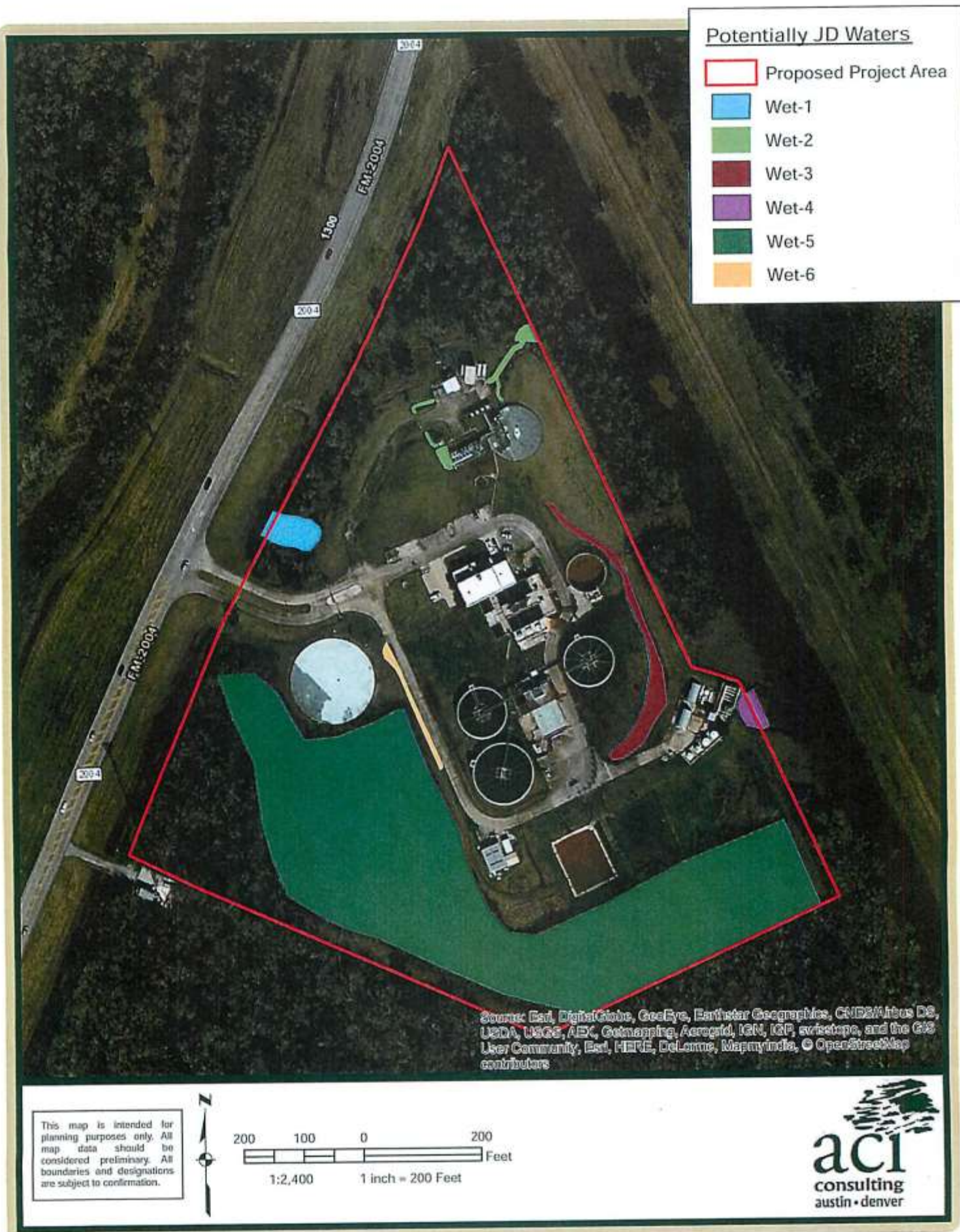




## Brazoport Water Authority WTP

Figure 6. Locations of backhoe trenches and shovel tests.





Brazosport Water Authority WTP  
Figure 7 - Potentially Jurisdictional Waters of the U.S.